Twin Oaks Dairy
Northwest of Metcalfe Road
off State Route 101 (Monterey Road)
Coyote Vicinity
Santa Clara County
California

HABS No. CA-2016

HABS
CAL,
43-COYO.V,
2-

PHOTOGRAPHS
WRITTEN HISTORIC AND DESCRIPTIVE DATA

Historic American Buildings Survey
Heritage Conservation and Recreation Service
Department of Interior
Washington, D.C. 20232

HISTORIC AMERICAN BUILDINGS SURVEY HABS No. CA-2017

HABS CAL 43-COYO.V, 2-

TWIN OAKS DAIRY

Location: Northwest of Metcalfe Road, off State Route 101 (Monterey Road), Coyote Vicinity, Santa Clara County, California.

USGS Santa Teresa Hills Quadrangle, Universal Transverse Mercator Coordinates: 10.610750.4121270.

Present Owners: State of California

Present Occupants: Vacant

Present Use: Vacant; one structure, and salvaged material from other structures removed for interpretive exhibits at the San Jose Historical Museum.

Significance: This complex is representative of agricultural development in Santa Clara County during the early twentieth century. The barns and milk processing structures are similar to those found in many dairies in the vicinity. Twin Oaks Dairy, like many in the state before 1930, was operated by a family who leased the site from a large landholder. It was owned and operated by families of Italian-Swiss and Portuguese descent, the ethnic groups most often associated with this industry in California.

PART I. HISTORICAL INFORMATION

A. Overview of the Dairy Industry in Santa Clara County:

The dairy industry in Santa Clara County began to develop in the mid-nineteenth century, after America gained control of land in California which resulted in a shift to more intensive land use. The north coast counties dominated the industry during the nineteenth century. Although dairying never became as important as fruit growing in Santa Clara County, it was an important part of the agricultural economy in the late nineteenth and early twentieth centuries. In 1859, Santa Clara County ranked third in the state in dairying and produced 200,000 pounds of butter, and 250,000 pounds of cheese (Schmitt, p. 105).

Most dairies in the county were located in the foothills of the valley on land leased from large landholders. Until the 1930s dairying depended primarily on hand labor. Milkers were hired by the dairyman, and each was responsible for 18 to 20 cows. Butter and cheese processing employed hand operated equipment. (Steele, Pearson). Two ethnic groups were associated with

dairying in California. The Italian-Swiss arrived in California mostly between 1849 and 1869. Portuguese immigrants came to the state in large numbers just before World War I. Members of both groups started as workers on already established dairies, and some eventually became proprietors of their own dairies.

Around 1910 new techniques of cooling, employing ammonia gas pumped through stainless steel pipes, became available. With the further development of refrigeration technology, modern transportation networks, and large scale irrigation in the 1920s and 1930s, the main dairying areas in California shifted from the coast to the Great Valley, where land was less expensive. This, in combination with the "milk wars" of the 1930s, caused the abandonment of many small family operated dairies in the county. After World War II, when the county underwent rapid urbanization, sanitation standards forced the relocation or abandonment of more dairies. New technologies also continued to discourage small scale family operations. In 1977, there were only nineteen dairies remaining in Santa Clara County, compared with an estimated three hundred during World War II.

B. History of the Twin Oaks Dairy:

The dairy is located on 4.7 acres of land which was originally a part of the Rancho Yerba Buena, laid out in the 1840s. Sections of the property are located upon a small knoll, and the remainder is located on flat terrain to the south of the knoll. A creek runs through the center of the dairy complex. By 1876, a man by the name of Piercy had acquired 4000 acres of the Rancho (Thompson and West). Around the turn of the century, the Righettis, an Italian-Swiss family, bought a fifty acre tract of Piercy's property including the site of the dairy. Righetti sold his property to the Ramelli family ca. 1910-1915. (Carrie Ramelli, interview). The structures that comprise the dairy complex were apparently constructed around the time that the Ramelli family bought the land. The family owned several large dairies in the valley, and leased the Twin Oaks Dairy to dairymen or farmers. The first tenants were probably the Silva family who leased the dairy starting around 1915. (Ramelli, interview; Silva, interview). The Silva family was of Portuguese descent. Most of the dairy workers employed during their tenancy were Portuguese or Italian-Swiss. The Silvas owned over 100 head of cattle, most of which were Holsteins. Improvements to the dairy during their tenancy included installation of a gas-operated cooling machine which pumped ammonia gas through stainless steel tubes to cool the milk. Prior to this, milk was cooled only by water from an artesian well. The Silva family left the dairy around 1920 and were replaced by the

Shattuck family. They operated the dairy until the end of the decade. At this time the Orlando family leased the Twin Oaks Dairy, and used the land to raise broccoli, tomatoes, lettuce and alfalfa. It is not known if the complex was used as a dairy after this time.

C. Sources of Information:

1. Drawings: 2 measured drawings of the Milk House (Structure 3), Prepared for the City of San Jose in cooperative agreement with the California Department of Transportation, District 04
Drawn by Dene Hendrick, 1977 available at the San Jose Historical Museum.

2. Bibliography:

a. Primary and unpublished sources:

Interview with George Orlando, Gilroy California, 1977.

Interview with Carrie Ramelli, Coyote California, 1977.

Interview with Anthony Silva, Gilroy California, 1977.

King, F. and P. Hickman, "The Southern Santa Clara Valley: A General Plan for Archaeology," 1973. Manuscript on file with the Frederick Burk Foundation for Education, California State University, San Francisco, California.

Schmitt, D.L. "History of the Santa Clara Valley: The American Period, 1846-1865." MA thesis, University of California, 1928.

b. Secondary and published sources:

Bohme, F.G. "The Portuguese in California," California Historical Society Quarterly. Vol 35, pp. 233-252, 1956.

Pearson, R.A. Notes Upon Dairying in California. U.S. Department of Agriculture, Bureau of Animal Industry. Washington, D.C. 1900.

Raup, H.F. "The Italian-Swiss in California," California Historical Society Quarterly. Vol 30, pp. 305-314, 1951.

"Santa Clara County and Its Resources," San Jose Mercury, 1895, 1896.

Sawyer, E.T. History of Santa Clara County with Biographical Sketches. Los Angeles, California: 1922.

Thompson and West, Historical Atlas Map of Santa Clara County, 1876.

Prepared by Emily J. Harris
Historic American Buildings Survey
August 1979

From research compiled by
the Federal Highway
Administration
Caltrans
1977-1978

PART II. ARCHITECTURAL INFORMATION

Structure 1: Feed Barn. This large (78' x 90') frame barn functioned in the areas of feed storage, feeding, and milking for the dairy herd. The feed barn rises approximately 40 feet to the peak of the shingled gable roof to allow for hay storage in the mow. The mow is flanked by a longitudinal milking area on the southwest side and a longitudinal feeding area on the northeast side. This arrangement, known in barns as a basilican plan (central "nave" with flanking side aisles), was devised for barns where the span was too great for the rafters to take the load of the roof and too wide for horizontal beams to tie the outer walls at plate level. In this barn, two sets of purlins and purlin posts result in a central aisle and paired side aisles. The primary purlins and purlin posts demarcate the mow. The aisles between the primary and secondary purlin posts functioned as a working area and possibly a space for implement storage. The aisles between the secondary purlin posts and the side walls functioned, as noted, as feeding and milking areas.

The barn is framed in rough-sawn redwood, with some use of Oregon pine (Douglas fir) in bracing. The wall posts and plates are 6x6, while the primary purlin posts are 4x6 and the secondary purlin posts are 4x4. The primary purlins are paired 2x6's, and the secondary purlins are paired 2x4's. Angle braces in both horizontal and vertical planes in the wall and purlin frames are 2x6. Rafters are 2x6. The primary purlin posts on the southwest side are braced to ground level by Oregon pine (Douglas fir) braces which are set in the work aisle on that side. This arrangement precludes implement storage on that side. The northeast work aisle was served from the northwest end by a door large enough for access for loaded wagons (or trucks).

The main doors for the barn are on the southeast end. There are hay doors at both ends, and a track down the centerline of the barn extends out both hay doors. A pulley system rigged on this track was used to unload hay wagons or trucks at either end of the barn. The hay was then moved down the centerline track for deposit in the mow. The mow was served on ground level by a tram which was used to transport hay to the Milking Barn (Structure 2) immediately to the southeast. The tram car(s) ran on grooves in the concrete floor of the Milking Barn. A grooved concrete pad spans the space between the Milking Barn and the Feed Barn and extends a short distance inside the main door of the Feed Barn. From this point the tram ran toward the center of the mow on strap iron rails fastened to 2x4's which rested on the earth floor. The outside aisle on the northeast side was used as a feeding area, serving the large corral which is sited on that side of the barn. Wooden feed troughs on that side are located outside the secondary purlin posts. The northeast side wall was open to allow access for the cattle to the troughs. The outside aisle on the southwest side was used as a milking area.

A line of stanchions, through which the cows' heads were inserted, runs between the secondary purlin posts. A concrete feed trough lies in the floor of the work aisle just inside the stanchions. The floor of the milking aisle is concrete, with a manure gutter running the length of the aisle. The use of concrete on the milking side facilitated easy washdown and cleaning. This structure will be dismantled as part of the Route 101 freeway project, Cochran Road to Ford Road, Santa Clara County, California. The wood from the structure will be used in restoration and interpretive projects by the San Jose Historical Museum.

Structure 2: Milking Barn. Little remains of this structure and its original form is unknown. The building axis is, like the Feed Barn, roughly northwest-southeast, and the building measures 32' x 90'. The floor is concrete, with tram grooves down the centerline and two sets of feed troughs and manure gutters. The center portion of the floor containing the tram grooves and feed troughs is raised 10-12 inches above the level of the flanking milking aisles. The milking stanchions were set in the curbs of this raised area. Concrete sidewalls are 4½ feet high and portions of wooden sill remain on top of these. The form of the frame structure which must have risen above this level is unknown. However, the low overhang of large limbs of two mature oak trees indicates that any roof must have been quite low. At the southeast end of the Milking Barn an inclined concrete pad, with grooves for improved footing, leads to the Milk House (Structure 3).

Structure 3: Milk House. This one story structure measures approximately 30' x 22' and is on a modified "L" plan. The floor is a concrete pad, and the walls are also concrete to dado height, and framed above this to plate level. Exterior sheathing is v-groove drop siding, while interior sheathing above dado level is horizontal tongue-and-groove. The windows were one-over-one-light double hung wood sash, with simple exterior casing. The two doorways on the east side of the building are topped by bracketed hoods, one gabled and the other shed-roofed. There is a hip roof and a square cupola with louvered vents and a hip roof. The roof extends over the handling/loading area on the west side of the building, and is supported by 6 x 6 corner posts. Examination through attic access hatches reveals a former roof on the west side inside the existing extended roof, indicating that the extension over the handling/loading area is a later addition. The roof is shingled, and all eaves are boxed. A concrete water trough is extant on the north side of the building, as are concrete foundation piers for a former water tank. The interior cooler box is lined in redwood and "Apolloy" galvanized copper steel. This structure will be dismantled as part of the Route 101 freeway project, Cochran Road to Ford Road, Santa Clara County, California. It will be relocated to and restored at the San Jose Historical Museum.

Structure 4: Storage Shed. This is a small, gable-roofed frame structure approximately 10' x 20', on an east-west axis. Sheathing is unbattened vertical boards; the roof is shingled. There is

one door in the east end. The structure rests on a concrete slab floor. The original function is unknown, but perches and nesting boxes indicate the last use was a pigeon coop. This structure will be dismantled as part of the Route 101 freeway project, Cochran Road to Ford Road, Santa Clara County, California. The wood from the structure will be used in restoration and interpretive projects by the San Jose Historical Museum.

Structure 5: This structure is actually a collapsed building. Placed on a timber foundation, it was a frame structure 18' x 32' with wood floor and shingled roof of either gable or shed form. Building form and function are unknown, but it may have been a spring house or pump house as it straddles the headwaters of a large spring.

Structure 6: Lattice House. This wood frame structure with open sides is in the yard of the residence (structure 7). It was probably used for storage, cooling, or as a sitting area.

Structure 7: Residence. This wood frame structure with vertical board and batten siding measures 32' x 32'. It has a gable roof and double hung sash windows. The interior is sheathed with grooved planking boards. The structure was possibly built as early as 1905. Electrical fixtures appear to have been added ca. 1920. An alcove was added to the north side at an unknown date.

Structure 8: Wagon Barn. This is a 20' x 32' frame structure with a shed roof. Walls are unbattened 1x10 vertical boards. The roof is covered with corrugated metal. The building faces northeast, and had two high doors which allowed wagons to enter with tongues folded to the vertical position. The southeast doorway has had the upper half boarded in and a tracked sliding door hung over the lower half. The doors for the northwest doorway have been removed, but presumably were paired hinged doors. This structure will be dismantled as part of the Route 101 freeway project, Cochran Road to Ford Road, Santa Clara County, California. The wood from the structure will be used in restoration and interpretive projects by the San Jose Historical Museum.

Structure 9: Horse and Livery Stable. This one-and-one-half story frame barn measures 50' x 65' and has a hip roof. It is framed in redwood, using 4x4 posts, 2x4 plates, and 2x6 rafters. The ridge beam is 1x6. Walls are unbattened 1x12 vertical boards. The wall posts are cut at the top in barefaced tenons which hold the plates. A shed-roofed lean-to on the northeast side contains six horse stalls and a small tack room. The northwest two thirds of the barn was the mow and the southeast third was apparently used for implement storage. Entrance on the southeast end is via a center doorway

closed by an interior-hung sliding door on overhead track. Access on the northwest end is through a large open doorway in the southwest corner of the mow. Hipped-roof dormers at each end provide hay doors at loft height. The main roof uses no trusses, but 1x6 span braces are used between rafters in the mow.

The lean-to stall area had access at both ends: at the northwest via a doorway and gate leading to a small corral, and at the southeast via a doorway with sliding door on overhead track. The stall floors are raised slightly and are 2x12 boards. A hay trough runs the length of the stalls, allowing feeding from the mow. Grain boxes were provided for oats and barley in each stall. The tack room is located at the southeast end of the stalls. There are windows in the northeast wall for ventilation and manure removal. This structure will be dismantled as part of the Route 101 freeway project, Cochran Road to Ford Road, Santa Clara County, California. The wood from the structure will be used in restoration and interpretive projects by the San Jose Historical Museum.

Prepared by Emily J. Harris
Historic American Buildings Survey
August 1979

From research compiled by
Federal Highway Administration
Caltrans
1977-1978

PART III. PROJECT INFORMATION

This project was undertaken by the Federal Highway Administration and Caltrans in compliance with Executive Order 11593 and a Memorandum of Agreement with the Advisory Council on Historic Preservation as a mitigative effort in the project to improve Route 101 south of Cochran Road in Morgan Hill to north of Ford Road in San Jose. John Burns, AIA, was the HABS project coordinator. Photographs were taken by August 8 and 9, 1978 by Pete Asano. The written data was prepared in the HABS office by Emily J. Harris in August 1979, from research compiled by the Federal Highway Administration and Caltrans in 1977, and architectural descriptions of the buildings that will be dismantled prepared by John Snyder, Caltrans Staff Architectural Historian in 1978.